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Fred Allegrezza

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EXAMINER

PARRY, CHRISTOPHER L

ART UNIT

PAPER NUMBER

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 09/839,581	<b>Applicant(s)</b> ALLEGREZZA, FRED	
	<b>Examiner</b> CHRIS PARRY	<b>Art Unit</b> 2623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 30 June 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-7,9-14,16-19,21-24,53 and 54 is/are pending in the application.
- 4a) Of the above claim(s) 53 and 54 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-7,9-14,16-19 and 21-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Response to Arguments*

1. Applicant's arguments filed 30 June 2008 have been fully considered but they are not persuasive.

In response to applicant's argument (Page 2, last ¶) stating the restriction requirement for claims 53 and 54, the examiner respectfully disagrees.

In applicant's response on 25 July 2005 to a restriction requirement, applicant elected figure 2a and specified which claims were drawn to the elected figure. In the same response, applicant withdrew claims 25-48, 51, and 52. Originally filed claims 28 and 40 claimed:

*"wherein the processor creates the directory information depending on the length and amount of data to be stored on the storage devices"*

Claims 28 and 40 are considered analogous to claims 53 and 54 which claim:

*"wherein the directory information comprises an amount of the data to be stored"*

Furthermore, step 280 of figure 2B, the CPU creates a directory based on the data to be stored (Page 8, line 1) which would include the directory information comprises an amount of data to be stored.

Thus the election by original presentation requirement is proper such that applicant previously elected to prosecute the claims drawn to figure 2a which is a

method for retrieving data and forgo prosecuting claims drawn to figure 2b which is a method for storing data.

In response to applicant's argument (Page 4, 3<sup>rd</sup> ¶) stating, Rege fails to disclose a switch independently routing requests and responses obtained by the processor, the examiner respectfully disagrees.

Rege discloses server 300 or "processor" receives requests from media devices. Server 300 generates a switching request 700 and sends the request to the arbiter 600 which is included in switch 400 (figure 4; Col. 3, lines 64-66). Further, arbiter 600 sets the switches based on the information in the switching request 700, wherein the switching request 700 includes a source address and a destination address (Col. 4, lines 5-8 and lines 56-57 and Col. 5, lines 1-3). Thus, Rege discloses wherein the switch 400 independently routes a request, by connected the servers 300 to the disks 800 by using the source address and the destination address contained in the switching request 700 received from server 300 or "processor", for retrieving data from the designated processor directly to the storage devices containing the requested data.

In response to applicant's argument (Page 8, 3<sup>rd</sup> full ¶) stating Belknap fails to remedy the deficiencies of Rege, the examiner respectfully disagrees.

Belknap discloses a switch 12, wherein the switch 12 independently routes a request, that is by accessing the header of the request which controls the switching within switch 12 (Col. 7, lines 4-7), for retrieving data from the designated processor directly to the storage devices 16 containing the requested data based on directory information obtained by the processor, that is storage devices comprises RAID mapping or "directory information" for the processors to facilitating switching requests (Col. 7, lines 53-67).

Further, using the directory information, communication node 14 activates the storage nodes 16 that need to be involved and moves data between the storage nodes 16 and communication nodes 14 via low latency switch 12 (Col. 9, lines 8-31).

In response to applicant's argument (Page 11) that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Belknap provides a hierarchical solution to different performance requirements and results in a modular system that can be customized to meet market requirements (Belknap; Col. 2, lines 42-48).

***Election/Restrictions***

2. Newly submitted claims 53-54 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: Claims 53-54 are directed towards the CPU is designated to store the video files on the storage system creates a directory based on the data to be stored and stores directory information on disk drives (Page 4, lines 20-22). The claims currently presented are directed towards CPUs having access to the directory to allow access to the data stored on the disk drives (Page 5, lines 4-6).

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 53-54 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-2, 4-7, 9-14, 16-19, and 21-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rege (USPN 6,128,467) [cited by applicant on July 16, 2007] in view of Belknap et al. "Belknap" (USPN 5,586,264).

Regarding Claim 1, Rege discloses a system (200 – figure 2) for retrieving data distributed across a plurality of storage devices (800 – figure 2) (Col. 3, lines 18-27), the system comprising: a plurality of processors (300 – figure 2), wherein upon receipt of a request for retrieving data, a processor is designated for handling the request (Col. 3, lines 28-63, Col. 5, lines 64-67).

Rege further discloses a switch (400 – figure 2) arranged between the processors (300 – figure 2) and the storage devices (800 – figure 2), wherein the switch independently routes a request for retrieving data from the designated processor directly to the storage devices containing the requested data and independently routes responses from the storage devices directly to the designated processor and wherein the data comprises video stream data (figures 4 & 5; Col. 3, lines 19-35; Col. 3, line 64 to Col. 4, line 39; Col. 4, lines 56-67).

Rege teaches servers 300 generate data request packets that are sent to disks 800 when a request from a customer is received. The request includes a header, disk address field, size field, server memory address field, and error correction field. The disk address is the logical address of the portion of the selected multimedia to be transferred to the server 300 from disk 800 (Col. 6, lines 6-46). However, Rege is silent on disclosing wherein the switch independently routes a request for retrieving data from the designated processor directly to the storage devices containing the requested data

based on directory information obtained by the processor, and independently routes responses from the storage devices directly to the designated processor based on the directory information obtained by the processor, and wherein the data comprises video stream data.

In an analogous art, Belknap discloses a system (10 – figure 1) for retrieving data distributed across a plurality of storage devices (16 – figure 2) (Col. 6, lines 22-52), the system comprising: a switch (12 – figure 1), wherein the switch routes a request for retrieving data from the designated processor directly to the storage devices containing the requested data based on directory information (i.e., RAID mapping for data stored on disks 45) obtained by the processor, and routes responses from the storage devices directly to the designated processor based on the directory information obtained by the processor (Col. 7, lines 4-7 & lines 53-67; Col. 8, lines 41-53; Col. 9, lines 8-31).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Rege to include retrieving data from the designated processor directly to the storage devices containing the requested data based on directory information obtained by the processor, and independently routes responses from the storage devices directly to the designated processor based on the directory information obtained by the processor as taught by Belknap for the benefit of providing an improved data retrieval system that can provide video data to customers in a more immediate fashion.



As for Claims 2 and 14, Rege and Belknap disclose, in particular Rege teaches a resource manager (600 – figure 2) for designating a processor (300 – figure 2) to handle a request, based on the load on each processor (Col. 4, lines 41-67; Col. 5, lines 59-63; Col. 6, lines 39-46).

As for Claims 4 and 16, Rege and Belknap disclose, in particular Belknap teaches wherein the processor obtains the directory information (i.e., RAID mapping for data stored on disks 45) from the storage devices (Col. 7, lines 64-67; Col. 9, lines 8-31).

As for Claims 5 and 17, Rege and Belknap disclose, in particular Rege teaches the system of claim 1, further comprising at least one high speed network (i.e., LAN 210 – figure 2) connected to the storage devices and arranged between the switch and the storage devices (Col. 3, lines 18-37).

As for Claims 6 and 18, Rege and Belknap disclose, in particular Rege teaches wherein the switch accommodates a plurality of high speed networks (i.e., LAN 210 – figure 2) and connected storage devices (Col. 3, lines 28-40).

As for Claims 7 and 19, Rege and Belknap disclose, in particular Rege teaches wherein the high speed network is an Ethernet network (Col. 4, lines 56-67).

As for Claims 9 and 21, Rege and Belknap disclose, in particular Rege teaches wherein the storage devices are disk drives (Col. 5, lines 19-44).

As for Claims 10 and 22, Rege and Belknap disclose, in particular Rege teaches wherein the data is stored in a Redundant Array of Inexpensive Disks (RAID) format among the disk drives (Col. 5, lines 36-63).

As for Claims 11 and 23, Rege and Belknap disclose, in particular Belknap teaches the system of claim 1, further comprising a high speed network for delivering the retrieved data from the designated processor to a client device (Col. 12, lines 50-53).

As for Claims 12 and 24, Rege and Belknap disclose, in particular Belknap teaches wherein the high speed network is an Asynchronous Transfer Mode (ATM) network (Col. 12, lines 50-53).

Regarding Claim 13, Rege discloses a method for retrieving data distributed across a plurality of storage devices (Col. 3, lines 29-42), the method comprising the steps of: receiving a request for retrieving data (Col. 3, lines 29-31), wherein the data comprises video stream data (Col. 3, lines 18-33).

Rege further discloses designating a processor (300 – figure 2) for handling the request (Col. 4, lines 41-67; Col. 5, lines 59-63; Col. 6, lines 39-46).

Rege teaches returning responses from the storage devices (800 - figure 2) directly to the designated processor via the switch (400 - figure 2) (Col. 3, lines 33-35), wherein the switch independently route the request for retrieving data and the responses between the storage devices and the processor (figures 4 & 5; Col. 3, lines 19-35; Col. 3, line 64 to Col. 4, line 39; Col. 4, lines 56-67).

Rege is silent on disclosing forwarding the request directly from the designated processor to the storage devices containing the data via a switch and disclosing wherein the switch uses directory information obtained by the processor to route requests.

In an analogous art, Belknap discloses a method for retrieving data distributed across a plurality of storage devices (Col. 17, lines 28-65), the method comprising the steps of: receiving a request for retrieving data, wherein the data comprises video stream data (Col. 8, lines 32-35).

Belknap discloses forwarding the request directly from the designated processor (14 – figure 1 & 1D) to the storage devices (16 – figure 1 & 1C) containing the data via a switch (12 – figure 1 & 1A) (Col. 8, lines 40-52; Col. 9, lines 8-19; Col. 12, lines 57-62)

Belknap teaches returning responses from the storage devices directly to the designated processor via the switch (Col. 12, lines 57-59), wherein the switch uses directory information (i.e., RAID mapping for data stored on disks 45) obtained by the processor to route the request for retrieving data and the responses between the storage devices and the processor (Col. 7, lines 4-7 & lines 53-67; Col. 8, lines 41-53; Col. 9, lines 8-31). Therefore, it would have been obvious to one of ordinary skill in the

art at the time the invention was made to modify the system of Rege to include retrieving data from the designated processor directly to the storage devices containing the requested data based on directory information obtained by the processor, and independently routes responses from the storage devices directly to the designated processor based on the directory information obtained by the processor as taught by Belknap for the benefit of providing an improved data retrieval system that can provide video data to customers in a more immediate fashion.

### ***Conclusion***

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHRIS PARRY whose telephone number is (571) 272-8328. The examiner can normally be reached on Monday through Friday, 8:00 AM EST to 4:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Grant can be reached on (571) 272-7294. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

CHRIS PARRY  
Examiner  
Art Unit 2623

/C. P./  
Examiner, Art Unit 2623

/Hunter B. Lonsberry/  
Primary Examiner, Art Unit 2623

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